

Amendments to the Claims:

Claims 1, 5 and 12 are amended as set forth hereinafter.

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A probe head for a coordinate measuring apparatus, the probe head comprising:

a yielding part;

5 a plurality of measuring systems for measuring the a deflection of said yielding part in respective directions;

a damping device for damping said yielding part in a pre-given direction; and,

10 said damping device including at least one friction brake for generating a friction force which can be to effect said damping with said friction force being electrically changed changeable.

2. (Original) The probe head of claim 1, said friction brake including a flag and an electromagnet for electromagnetically drawing said flag to said electromagnet.

3. (Original) The probe head of claim 2, wherein said flag is a first flag and said damping device includes a second flag; and, said first and second flags coact electromagnetically with said

electromagnet.

4. (Original) The probe head of claim 3, wherein at least one of said first and second flags is reinforced in the region of said electromagnet.

5. (Currently Amended) The probe head of ~~claim 1~~ claim 2, said damping device further comprising clamping means for clamping said flag.

6. (Original) The probe head of claim 5, wherein said flag has a side facing away from said electromagnet; and, said clamping means comprises a plate disposed on said side of said flag in spaced relationship thereto; a holder; and, said plate is resiliently mounted on said holder so as to permit a displacement relative thereto when said plate is drawn by said electromagnet to clamp said flag therebetween.

7. (Original) The probe head of claim 6, wherein said plate has a thickness greater than the thickness of said flag.

8. (Original) The probe head of claim 1, further comprising an electronic controller for electrically adjusting said friction force of said friction brake.

9. (Original) The probe head of claim 8, said electronic controller including means for adjusting said friction force in proportion to the time-dependent derivative of the measured

deflection in a particular direction (x, y, z).

10. (Original) The probe head of claim 9, said electronic controller including means for clamping said probe head for a short time to counter a rebound of the probe head during a contacting operation.

11. (Original) The probe head of claim 8, said friction brake including a flag and an electromagnet coacting with said flag; and, said electronic controller including means for applying an alternating current to said electromagnet for generating a low damping.

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12. (Currently Amended) The probe head of claim 8, said friction brake including a flag; an electromagnet coacting with said flag; and, a spring-suspended plate in spaced relationship to said flag; said electronic controller including means for clamping said friction brake by first applying a voltage (U_{SP}) above a threshold plate voltage (U_{plate}) so that said spring-suspended plate is pulled toward said electromagnet and then dropping said voltage (U_{SP}) to below said threshold voltage (U_{plate}) after said spring-suspended plate has been pulled toward said electromagnet.

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13. (Original) The probe head of claim 8, further comprising a measuring force generator drivable by said electronic controller; and, for clamping said yielding part in a pre-given desired position of a corresponding one of said measuring systems, said

5 electronic controller functioning to clamp said friction brake in
a desired position of said yielding part; and, causing said
measuring force generator to generate pulse-like measurement
forces opposite to the direction of the deflection relative to
said desired position until said corresponding one of said
10 measuring systems is in its zero position.

14. (Original) The probe head of claim 8, wherein said
electronic controller increases the friction force of said
friction brake or clamps said friction brake during acceleration
operations of said probe head.